

WHAT IS CLAIMED IS:

1. A multilayer type of information recording medium comprising:
a plurality of information recording layers into each of which
information is recordable; and
- 5 a single corresponding-information recording layer into which
information corresponding to the information recorded in the information
recording layers is recordable.
- 10 2. The multilayer type of information recording medium according
to claim 1, wherein the corresponding information is control information for
controlling either recording or reproduction of the information into and from
each of the information recording layers.
- 15 3. The multilayer type of information recording medium according
to claim 1, wherein the corresponding-information recording layer is
provided with a reflection layer to reflect an optical beam radiated to optically
read the corresponding information.
- 20 4. The multilayer type of information recording medium according
to claim 3, wherein a distance from a beam-incidence-side surface of the
medium to the corresponding-information recording layer is the same as a
distance from a beam-incidence-side surface of a monolayer type of
information recording medium provided with a single information recording
layer for recording the information to the single information recording layer.
- 25 5. The multilayer type of information recording medium according
to claim 4, wherein the distance from the beam-incidence-side surface of the
medium to the corresponding-information recording layer is 100 μm .
- 30 6. The multilayer type of information recording medium according
to claim 3, further comprising:
a plurality of adjustment layers located between the single

corresponding-information recording layer and the plurality of information recording layers and located continuously to the plurality of information recording layers, respectively, with the same level between each adjustment layer and the information recording layer kept.

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7. An information recording and reproducing apparatus for selectively recording or reproducing information into or from an information recording layer consisting of either a signal information recording layer of a monolayer type of information recording medium or one of a plurality of 10 information recording layers of a multilayer type of information recording medium, the apparatus comprising:

15 a first setting device configured to initialize operating parameters to be appropriate for either the recording or reproduction of the information into or from the information recording layer of the monolayer type of information recording medium;

20 a determination device configured to determine whether or not an information recording medium loaded currently in the information recording and reproducing apparatus is the monolayer type of information recording medium or the multilayer type of information recording medium, the determination being carried out after the initialization of the operating 25 parameters;

25 a first recording/reproducing device configured to start recording or reproducing the information into or from the information recording layer of the monolayer type of information recording medium on the basis of the initialized operating parameters, when the determination device determines that the currently loaded information recording medium is the monolayer type of information recording medium;

30 a second setting device configured to change the operating parameters to be appropriate for either the recording or reproduction of the information into or from the information recording layer of the multilayer type of information recording medium, when the determination device determines that the currently loaded information recording medium is the

multilayer type of information recording medium; and
a second recording/reproducing device configured to start recording
or reproducing the information into or from the information recording layer
of the multilayer type of information recording medium on the basis of the
5 changed operating parameters.

8. The information recording and reproducing apparatus according
to claim 7, wherein the multilayer type of information recording medium
comprises a single corresponding-information recording layer into which
10 information corresponding to the information recorded in the information
recording layers is recordable.

9. The information recording and reproducing apparatus according
to claim 8, wherein the corresponding-information recording layer is
15 provided with a reflection layer to reflect an optical beam radiated to optically
read the corresponding information.

10. The information recording and reproducing apparatus
according to claim 9, wherein a distance from a beam-incidence-side surface
20 of the medium to the corresponding-information recording layer is the same
as a distance from a beam-incidence-side surface of a monolayer type of
information recording medium provided with a single information recording
layer for recording the information to the single information recording layer.

25 11. The information recording and reproducing apparatus
according to 10, wherein the distance from the beam-incidence-side surface
of the medium to the corresponding-information recording layer is 100 µm.

30 12. The information recording and reproducing apparatus
according to claim 9, wherein the multilayer type of information recording
medium further comprises a plurality of adjustment layers located between
the single corresponding-information recording layer and the plurality of

information recording layers and located continuously to the plurality of information recording layers, respectively, with the same level between each adjustment layer and the information recording layer kept.

5 13. An information recording and reproducing method for selectively recording or reproducing information into or from an information recording layer consisting of either a signal information recording layer of a monolayer type of information recording medium or one of a plurality of information recording layers of a multilayer type of information recording
10 medium, the method comprising the steps of:

 initializing operating parameters to be appropriate for either the recording or reproduction of the information into or from the information recording layer of the monolayer type of information recording medium;

15 determining whether or not an information recording medium loaded currently is the monolayer type of information recording medium or the multilayer type of information recording medium, the determination being carried out after the initialization of the operating parameters;

20 first starting recording or reproducing the information into or from the information recording layer of the monolayer type of information recording medium on the basis of the initialized operating parameters, when it is determined that the currently loaded information recording medium is the monolayer type of information recording medium;

25 changing the operating parameters to be appropriate for either the recording or reproduction of the information into or from the information recording layer of the multilayer type of information recording medium, when it is determined that the currently loaded information recording medium is the multilayer type of information recording medium; and

30 second starting recording or reproducing the information into or from the information recording layer of the multilayer type of information recording medium on the basis of the changed operating parameters.

14. A program enabling a computer to function for selectively

recording or reproducing information into or from an information recording layer consisting of either a signal information recording layer of a monolayer type of information recording medium or one of a plurality of information recording layers of a multilayer type of information recording medium, the

5 computer providing the functions of:

- initializing operating parameters to be appropriate for either the recording or reproduction of the information into or from the information recording layer of the monolayer type of information recording medium;
- 10 determining whether or not an information recording medium loaded currently is the monolayer type of information recording medium or the multilayer type of information recording medium, the determination being carried out after the initialization of the operating parameters;
- 15 first starting recording or reproducing the information into or from the information recording layer of the monolayer type of information recording medium on the basis of the initialized operating parameters, when it is determined that the currently loaded information recording medium is the monolayer type of information recording medium;
- 20 changing the operating parameters to be appropriate for either the recording or reproduction of the information into or from the information recording layer of the multilayer type of information recording medium, when it is determined that the currently loaded information recording medium is the multilayer type of information recording medium; and
- 25 second starting recording or reproducing the information into or from the information recording layer of the multilayer type of information recording medium on the basis of the changed operating parameters.